

Project Proposal

Project Title: Student Learning Management System

Group Name: Group_4

Group Members:

1. Sadvik Kondadi
2. Sai Chandra Teja Akkala
3. Shashank Kodishala
4. Padmaja Soma
5. Deepak Reddy Punuru
6. Thanwish Ram Pothugunta
7. Deepu Gondhi
8. Sanjay Ramaswamy Adla
9. Nithin Reddy Pinikesi

Project Description:

The Student Learning Management System (SLMS) functions as an online platform which enhances educational institutions through streamlined course administration alongside student enrollment capabilities along with material distribution and academic records monitoring characteristics. This system provides distinct functionality to its user roles which match the responsibilities of Admins, Instructors and Students as well as Customer Support staff.

System Overview:

The core elements of the SLMS include all the following features:

The Admin Panel:

It lets administrators handle users including students as well as instructors and also creates courses and assigns them and provides access to financial reports and customer support management and enables course performance tracking.

Instructor Panel:

Instructors get access to create new courses and upload learning assets and both assignment setting and student grading and performance tracking capabilities.

Students Panel:

Student users browse courses before they enroll and download resources and track their progress, then they submit assignments and make educational payments.

Customer Support Panel:

Staff can handle student questions through the panel while resolving cases independently but refer unanswered issues to administrators.

Development Environment:

Front End:

Language: Python 3

Package: Streamlit

Back End:

Language: Python 3

Package: Pymongo

Database: MongoDB

Testing: Pytest

Version Control: Git with GitHub

Project Management Tools: Trello

Initial Planning:

Phase 1: Planning & System Design ()

- Define system requirements, features, and goals.
- Finalize the technology stack and tools.

Phase 2: Frontend Development ()

- Develop a login page with full functionality.
- Develop user interfaces for Admin, Instructor, Student, and Customer Support.

Phase 3: Database Operations ()

- Database Development Inserting the required data.
- Querying for required fetches for each application of Frontend.

Phase 4: Backend Development ()

- Integrating the Database.
- Final User Acceptance Testing and Debugging.

Phase 5: Testing and Deployment ()

- Unit Testing by each member of their developed component.
- Integration Testing using PyTest
- Deploy the Database and Streamlit app to Streamlit cloud.

Timeline Chart:

Phase	Start Date	End Date	Duration
Phase 1: Planning & System Design	Jan 20 2025	Feb 3 2025	2 week
Phase 2: Frontend Development	Feb 4 2025	Feb 24 2025	3 weeks
Phase 3: Database Operations	Feb 25 2025	Mar 17 2025	3 weeks
Phase 4: Backend Development	Mar 18 2025	Apr 7 2025	3 weeks
Phase 5: Testing and Deployment	Apr 8 2025	Apr 21 2025	2 week
Phase 6 : Overall Project evaluation	Apr 22 2025	Apr 28 2025	1 week

Risk Management:

Risk	Monitoring	Re-evaluation	Contingency Plan
Development Delays	Weekly progress updates, task tracking tools, milestone tracking	Weekly sprint reviews, reassessment of resource allocation	Reallocate resources, adjust scope (MVP), buffer time
Integration Issues	Continuous integration testing, frequent synchronization, API documentation	Frequent testing, end-of-sprint demos	Mock services, API versioning, rollback mechanism
User Acceptance Testing Failure	User Feedback and Changes accordingly	Mid-project feedback, adjust features based on user reviews	Focus on core functionality, iterate on feedback
External Dependencies	Monitoring third-party services, SLAs, updates	Reevaluate reliability based on service changes	Backup services, local alternatives

Roles in the Project:

Task	Preference
Project Management Lead	Deepak Reddy
Requirements Lead	Deepu Gondhi
Design Lead	Shashank
Implementation Lead for front end	Sadvik Kondadi
Implementation Lead for back end	Nithin Reddy
Configuration Management Lead	Chandra Teja
Testing Lead	Padmaja
Documentation Lead	Sanjay
Demo and presentation Lead	Chandra Teja
System Administrator Lead	Sadvik Konadi, Chandra Teja
Other:	

Roles in the Report:

Member name	Contribution description	Overall Contribution (%)	Note (if applicable)
Sadvik	Github directories creation and readme file	11%	
Chandra Teja	Information gathering, Video Presentation	11%	
Shashank	Risk Management and design of project	11%	
Padmaja	Timeline chart and tracking of		

	Project schedule in Kanban board	11%	
Deepak Reddy	Project Description and project planning	11 %	
Deepu Gondhi	Development Environment	11%	
Nithin Reddy	Power Point Presentation	11%	
Sanjay Ramaswamy	Documentation of Report	11%	
Thanwish Ram	Intial Planning and phases of project	11%	